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EXAMINER	
ENGLAND, DAVID E	

ART UNIT	PAPER NUMBER
2443	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USpatents@armstrongteasdale.com

Office Action Summary	Application No.	Applicant(s)	
	10/733,866	HILL ET AL.	
	Examiner	Art Unit	
	DAVID E. ENGLAND	2443	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1, 3 – 17, 19 – 32 and 34 – 42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3 – 17, 19 – 32 and 34 – 42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 3 – 17, 19 – 32 and 34 – 42 are presented for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 32 and 34 - 41 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4. Claims 32 states a "computer readable medium having computer-executable instructions to perform a method". The "computer readable medium" is not defined in the specification as being either hardware or software. The "computer readable medium" only states "having computer-executable instructions" which can be interpreted as solely software per se. Applicant need to cancel or amend the claims to state hardware that is found in the specification that the executable instructions is **stored** thereon. Furthermore, if amendments are made, the Applicant needs to point to the section(s) of the specification that support this amendment.

5. Claims 34 – 41 are rejected for their dependency on claim 32 and stating "computer readable medium".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 3 – 17, 19 – 32 and 34 – 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tunnicliffe et al. (6272110), hereinafter Tunnicliffe, in view of Datta et al. (6209033), hereinafter Datta.

8. Referencing claim 1, as closely interpreted by the Examiner, Tunnicliffe teaches a method of maintaining capacity of a network comprising:

9. defining future times at which a capacity of the network is evaluated, (e.g., col. 4, lines 20 – 59);

10. determining a total capacity of the network (TNC) at each of the future times, (e.g., col. 4, lines 20 – 59);

11. determining a total demand of users (TUD) for the network at each of the future times, (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55);

12. determining a predicted utilization (PU) of the network at each of the future times as a function of the total demand of users (TUD) and the total capacity of the network (TNC), (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55);

13. defining a maximum acceptable utilization of the network at each of the future times, (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55);

14. comparing the predicted utilization (PU) of the network to at least one of the maximum and minimum acceptable utilization of the network at each of the future times, (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55); and

15. determining in response to the comparing, for each future time, a change in network capacity (DCNC) to be applied to the network in order to increase or decrease the capacity of the network, (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55), but does not specifically teach the change in total network;

16. defining a maximum acceptable utilization and a minimum acceptable utilization of the network.

17. Datta teaches the change in total network, (e.g., col. 6, line 65 – col. 7, line 9);

18. defining a maximum acceptable utilization and a minimum acceptable utilization of the network, (e.g., col. 3, lines 11 – 35, upper and lower);

19. comparing the predicted utilization (PU) of the network to at least one of the maximum and minimum acceptable utilization of the network, (e.g., col. 11, line 60 – col. 12, line 7).

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Datta's changing of the entire network and multiple bandwidth thresholds with Tunnicliffe's teachings of specific changes in bandwidth and client capacity since it has been held that mere duplication of parts, i.e. utilizing Tunnicliffe's one device increase or decrease of bandwidth in multiple devices that would make up an entire network such as Datta, would only take one of ordinary skill to perform, In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Furthermore, utilizing multiple thresholds, i.e., max and min, allows the system to monitor a client and keep them in an acceptable range so that the client does not go over or too under what they are allotted.

21. Applicant should further noted that the limitations above do not suggest an actual change in total network capacity. All that is stated is it is determined what the total change to be applied to the network, which means there is no step in actually applying the change.

22. Referencing claim 3, as closely interpreted by the Examiner, Tunnicliffe teaches applying the determined change in network capacity (DCNC) to the network, (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55).

23. Referencing claim 4, as closely interpreted by the Examiner, Tunnicliffe teaches determining at each of the future times a lead time for adding product for applying the determined change in network capacity (DCNC) to the network , (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55); and

24. in advance of each future time based on the lead time determined with respect to each particular future time, initiating efforts to obtain product for applying the determined change in network capacity (DCNC) , (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55).

25. Referencing claim 5, as closely interpreted by the Examiner, Tunnicliffe teaches the lead time is a function of an installation time for installing said product and an advance purchase time for obtaining said product , (e.g., col. 3, lines 22 – 55).

26. Referencing claim 6, as closely interpreted by the Examiner, Tunnicliffe teaches determining a total capacity of the network (TNC) at each of the future times is a function of

determining a present capacity of the network (PNC) and identifying a planned change in network capacity (PCNC) to be applied the network between a present time and each of the future times , (e.g., col. 3, lines 22 – 55).

27. Referencing claim 7, as closely interpreted by the Examiner, Tunnicliffe determining a change in network capacity (DCNC) is a function of one or more of the following:

28. a current utilization (CU) of the network, a growth trend of a utilization of the network, or a cost measure of a capacity to be added to the network , (e.g., col. 3, lines 22 – 55).

29. Referencing claim 8, as closely interpreted by the Examiner, Tunnicliffe teaches said current utilization (CU) of the network is indicative of a high percent usage of a present capacity of the network (PNC) for a particular percentage of time , (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55).

30. Referencing claim 9, as closely interpreted by the Examiner, Tunnicliffe teaches the growth trend is based on a regression of data representative of a past growth of the utilization of the network , (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55).

31. Referencing claim 10, as closely interpreted by the Examiner, Tunnicliffe teaches determining a total demand of users (TUD) for the network at each of the future times is a function of determining a present demand of users (PUD) for the network and determining a change in demand of users (CUD) for the network between a present time and each of the future

times , (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55).

32. Referencing claim 11, as closely interpreted by the Examiner, Tunnicliffe teaches determining an anticipated change in demand of users (CUD) for the network comprises determining a demand requirement for a roll-out of an application operating via the network , (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55).

33. Referencing claim 12, as closely interpreted by the Examiner, Tunnicliffe teaches determining a predicted utilization (PU) of the network at each of the future times comprises dividing the total demand of users (TUD) for the network by the total capacity of the network (TNC) at each of the future times , (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55).

34. Referencing claim 13, as closely interpreted by the Examiner, Tunnicliffe teaches the acceptable utilization of the network is a function of a response time of an application operating via the network , (e.g., col. 3, lines 22 – 55).

35. Referencing claim 14, as closely interpreted by the Examiner, Tunnicliffe teaches the response time of the application is a function of one or more of the following:

36. a distance between a client and a server of the application wherein said client and server are coupled to the network, a connection speed of the client to the network, or a utilization of the network during a period of time at which the client accesses the application , (e.g., col. 4, lines

20 – 59, col. 5, lines 4 – 55).

37. Referencing claim 15, as closely interpreted by the Examiner, Tunnicliffe teaches planning a budget for applying the determined change in network capacity (DCNC) to the network and determining a cost measure of the determined change in network capacity (DCNC) , (e.g., col. 4, lines 20 – 59, col. 5, lines 4 – 55).

38. Claims 16, 17, 19 – 32 and 34 – 41 are rejected in the same light as the above claims and their teachings can also be found in the above cited areas of the prior art.

39. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tunnicliffe and Datta in further view of Westphal (2004/0202160).

40. As per claim 42, as closely interpreted by the Examiner, Tunnicliffe and Datta teach a type of determining a cost measure of the determined change in network capacity comprises determining a cost measure of the determined change in network capacity by analyzing past trends of cost increases or decreases for networks, (see above cited areas of both references), but does not teach of similar size, distance, and location. Westphal teaches network clusters that are identical in topology and load balancing between the two identical networks based on how much load is on one cluster or it's cost as it can be interpreted, (e.g., ¶ 0019, 0025). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Westphal's ability to determine load or the cost of two identical networks with the combine

teachings of Tunnicliffe and Datta that teach the prediction of network capacity of a network since, in the combination of the references, if the two networks are identical, than it would be obvious to utilize the same cost of one network with the other since they have the same traits, i.e., size and distance.

Response to Arguments

41. Applicant's arguments filed 08/21/2008 have been fully considered but they are not persuasive.

42. In the Remarks, Applicant argues in substance that the 101 rejection is in error and that "computer readable medium" is well known in the art as hardware.

43. As to this Remark, Examiner would like the Applicant to view the MPEP which states what computer readable medium can be interpreted as if there is no definition as to what the Applicant is trying to teach that their computer readable medium is suppose to be, MPEP 2106.01. The Applicant's specification does not state, in any part, what a computer readable medium should be defined as. Besides the claims, the only occurrence of the term "computer readable medium" is found in paragraph 0008 of the Applicant's specification, which states, "In another form, the invention is a computer-readable medium having computer-executable instructions to perform a method to maintain...". As clearly seen the computer readable only has computer executable instructions and therefore is only software and **not** hardware with software stored thereon. As stated above if the Applicant were to amend the claims to teach memory or

hardware of some type that is found in their specification that has **stored on it** the computer-executable instructions, it would overcome the 101 rejection if properly claimed and supported in the specification of the application. The 101 rejection stands as stated above and further explained here.

44. In the Remarks, Applicant argues in substance that the prior art of Tunnicliffe and Datta do not teach the newly added limitations to the independent claims, a maximum and minimum acceptable utilization. More specifically, Applicant states that Datta only teaches only an upper bound or a lower bound being used as stated in the claim language.

45. As to this Remark, Examiner would like to draw the Applicant's attention to the cited areas of Datta, (e.g., col. 3, lines 10 – 35 and col. 8, lines 60 – 67 et seq., "An upper bound UB **and** lower bound LB are defied for each link by a system administrator", and col. 11, line 60 – col. 12, line 20 et seq.). In which, one can clearly see an upper **and** lower threshold that reads on the claim language as stated above.

46. All other arguments stem from the argument above and are therefore rejected as stated above.

Conclusion

47. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID E. ENGLAND whose telephone number is (571)272-3912. The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia Dollinger can be reached on 571-272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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